Contributions from the Herbarium of the Geological Survey of Canada.

(By Permission of the Director.)

By James M. Macoun,
Curator of the Herbarium.

VIII.

Reprinted from the Canadian Record of Science, October, 1895.

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VIII.

Aquilegia Jonesii, Parry.

High slopes of Sheep Mountain, Waterton Lake, Rocky Mountains, Lat. 49° 05′, July 29th, 1895. (*John Macoun*, Herb. No. 10,029.) New to Canada.

Berberis nervosa, Pursh.

Not rare in deep, moist woods in Trinity Valley, between Mabel Lake and Enderby, B.C., 1895. (*Jas. McEvoy*, Herb. No. 10,133.) Not before recorded east of Yale, B.C.

Berberis aquifolium, Pursh.

In open thickets, Waterton Lake, Lat. 49° 05′, Rocky Mountains, 1895. (*John Macoun*. Herb. No. 10,267.) Eastern limit in Canada.

Papaver Pyrenaicum, L.

A single specimen collected by Dr. G. M. Dawson in the South Kootanie Pass, Rocky Mountains, 1883. Re-discovered in 1895 by Prof. John Macoun on Sheep Mountain, Waterton Lake, Rocky Mountains, alt. 7,500 feet, Lat. 49° 05′. Herb. No. 10,269. New to America.

Lesquerella Ludoviciana, Wats.

Specimens collected at Medicine Hat, Assa., by Prof. John Macoun, in 1895, (Herb. No. 10,308) are the only specimens in our herbarium that can be referred here. The pubescence of the oblanceolate radical leaves is conspicuously stellate.

LESQUERELLA LUDOVICIANA, WATS., var. ARENOSA, Wats.

Vesicaria Ludoviciana, Macoun, Cat. Can. Plants, Vol. I., p. 54, in part, and Vol. I., p. 490.

From Western Manitoba to the Saskatchewan. The reference under *L. Ludoviciana*, Wats., var. *arenosa*, Wats., Macoun Cat. Can. Plants, Vol. II., p. 305, should go with *L. arctica*, Wat.

SISYMBRIUM VIRGATUM, Nutt.

In gravel amongst bushes, Police Point, Medicine Hat, Assa. In fruit May 31st, 1894. Herb. No. 3,069; prairies, 12-Mile Lake, Wood Mountain, Assa., June 6th, 1895. Herb. No. 10,007; meadows, Sucker Creek, Cypress Lake, Assa., 1895. Herb. No. 10,006. (*John Macoun.*) New to Canada. The Canadian specimens have longer pedicels and pods and are more paniculately branched than those from the Rocky Mountains in the United States, but Dr. Robinson, who examined our specimens, has been unable to detect a single significant or constant character to separate the plants from the two regions.

ARABIS DRUMMONDII, Gray: Macoun, Cat. Can. Plants' Vol. I., p. 43, in part.

A. Lyallii, Macoun, Cat. Can. Plants, Vol. I., p. 43; and Vol. I., p. 487, in part: J. M. Macoun, Can. Rec. Science, Vol. VI., p. 145.

From the Cypress Hills, Assiniboia, west to the Gold Range in British Columbia. Our specimens are from Cypress Hills, Assa.; Sheep Mountain, Waterton Lake, Rocky Mountains; mountains north of Devil's Lake, and at Kicking Horse Lake, Rocky Mountains. (*John Macoun.*) Maple Creek, Assa.; Toad Mountain, Kootanie Lake, B.C.; Mount Queest, Shuswap Lake, B.C. (*Jas. M. Macoun*) Rocky Mountains. (*Drummond.*)

ARABIS LYALLII, Wats.

Our specimens of this species are from West Summit of North Kootanie Pass. (*Dr. G. M. Dawson.*) Shore of Waterton Lake, Rocky Mountains; mountains north of Devil's Lake, Rocky Mountains. (*John Macoun.*) Lookout Mountain, Big Bend of Columbia River, B.C. (*Prof. Coleman.*)

VIOLA HOWELLII, Gray.

V. canina, L. var. *sylvestris*, Macoun, Cat. Can. Plants, Vol I., p. 63 in part.

V. canina, L. var. *longipes*, Macoun, Cat. Can. Plants, Vol. I., p. 493 in part.

In woods, New Westminster, B.C.; Cedar Hill, Shawnigan Lake and Nanaimo, Vancouver Island. (*John Macoun.*) Vancouver Island (*Streets*, vide Syn. Fl. North Am. Vol. I., p. 202.)

VIOLA ORBICULATA, Geyer; re-described and figured in Contr. from U.S. Herbarium, Vol. III., No. 4, p. 214.

V. sarmentosa, Macoun, Cat. Can. Plants, Vol. I., p. 493 in part.

V. sarmentosa Dougl. var. *orbiculata*, Robinson, Syn. Fl. N. Am., Vol. I., p. 199.

Western Summit of North Kootanie Pass, Rocky Mountains; Dean or Salmon River, B.C. (*Dr. G. M. Dawson*) Kicking Horse Lake, Rocky Mountains; summit of Selkirk Mountains, B.C.; Revelstoke, B.C.; mountains near Ainsworth, Kootanie Lake, B.C. (*John Macoun.*) *Viola sarmentosa* Dougl. seems in Canada to be confined to the Coast Range and Vancouver Island, all our specimens from the interior being plainly V. *orbiculata*, Geyer. The two plants have always been separated in our herbarium, though all were named *V. sarmentosa*.

ARENARIA CONGESTA, Nutt.

Open prairies, Sweet Grass Hills, Alberta, just north of the International Boundary, 1895. (*John Macoun.*) Not before recorded from Canada.

CLAYTONIA MEGARRHIZA, Parry.

Additional references for this species are: summit of Saddle Mountain, Banff, Rocky Mountains; summit of Sheep Mountain, Waterton Lake, Lat. 49° 05′, Rocky Mountains, Herb. No. 10,091. (*John Macoun.*)

HYPERICUM KALMIANUM, L.; Macoun. Cat, Can. Plants, Vol. I., p. 84.

On a small rocky island in the Ottawa River, Township Clarendon, Pontiac Co., Que. In flower July 24th, 1895. (*Robt. H. Cowley.*)

NEMOPANTHES CANADENSIS, DC.

Banks of west branch of Nottaway River, N.E. Ter., 1895. (*Dr. R. Bell.*)

LUPINUS PUSILLUS, Pursh.

L. Kingii, Macoun, Cat. Can. Plants, Vol. I., 103.

Dry sand hills, five miles west of the northern elbow of the South Saskatchewan; Crane Lake, Assa., Herb. No. 4,068; Police Point, Medicine Hat, Assa., Herb. No. 4,069; South of Wood Mountain, Assa.; Many Berries Creek, Milk River, Assa., Herb. No. 10,412; Milk River, Assa., Herb. No. 10,414. (*John Macoun.*) Along the Belly River, Alberta. (*Dr. Geo. M. Dawson.*)

LUPINUS MINIMUS, Dougl.; Macoun, Cat. Can. Plants, Vol. I., p. 103.

Summit of Sheep Mountain, Waterton Lake, Lat. 49° 05′, alt. 7,500 ft., July 31st, 1895. (*John Macoun*, Herb. No.

10,413.) The only authentic Canadian record, as it is doubtful whether it was found by Douglas north of the boundary.

CICER ARIETINUM, L.

Vicia (?), Macoun, Cat. Can. Plants, Vol. I., p. 512.

In dry soil at Chinaman's Ranch, above Spence's Bridge, Thompson River, B.C., Aug. 1883. (*Jas. Fletcher.*) Introduced in wool at Wingham, Ont., 1891. (*J. A. Morton.*) A native of Bengal.

SPIRÆA BETULIFOLIA, Pall.

Peel's River, Mackenzie River Delta, July 14th, 1892. (*Miss E. Taylor.*) Specimens from Qualco Lake, B.C., collected by Dr. G. M. Dawson, are doubtfully referred here. These are the only specimens of this species in our herbarium.

SPIRÆA LUCIDA, Dougl.; Pittonia, Vol. II., p. 221.

S. betulifolia, Macoun, Cat. Can. Plants, Vol. I., p. 126, in part.

Common in thickets and on hillsides, from the Rocky Mountains westward. Our specimens are from Kootanie Pass, Rocky Mountains. (*Dr. G. M. Dawson*) Valleys of the Rocky Mountains. (*Drummond*) Waterton Lake, Lat. 49° 05′, Rocky Mountains; Bow River Pass and Kicking Horse Lake, Rocky Mountains; Sproat and Deer Park, Columbia River, B.C.; Sicamous, B.C.; Spence's Bridge, B.C. (*John Macoun.*) Red Deer, Alberta. (*H. H. Gaetz.*)

SPIRÆA ARBUSCULA, Greene, Erythæa, Vol. III., p. 63.

S. betulifolia, Pall., var. *rosea*, Gray; Macoun, Cat. Can. Plants, Vol. I., p. 513.

In woods and thickets at the summit of the Selkirk Range, B.C. (*John Macoun. Jas Fletcher.*)

NEILLIA OPULIFOLIA, Wats.

Banks of West Branch of Nottaway River, N. E. Ter., 1895. (*Dr. R. Bell.*)

POTENTILLA OVINA.

P. dissecta, var. *pinnatisecta*, Macoun, Cat. Can. Plants, Vol. I., p. 517.

Low, tufted, the multicipitous ligneous caudex partly subterranean and clothed with the persistent bases of the leaves; leaves 1½ to 4 inches long of from 4 to 7 pairs of pinnæ, these parted into 2 or 3 linear pinnæ, villous-pilose at apex and sparingly so on both surfaces. Flowering stems scarcely leafy, 4 to 6 inches high, the flowers on slender pedicels an inch or two long; achenes few, obliquely obovoid, smooth and glabrous.

High slopes of Castle Mountain, Rocky Mountains, Herb. No. 7,242; crevices of rocks at The Mound, Banff, Rocky Mountains, Herb. No. 7,235; Sheep Mountain, Waterton Lake, Lat. 49° 05′, Rocky Mountains, Herb. Nos. 10,488, 10,489. (*John Macoun.*)

Though considered a variety of *P. Plattensis* by Dr. Watson, Prof. Macoun always believed the Rocky Mountain plant to be quite distinct from that species, and more nearly related to *P. dissecta*. Later he came to the conclusion that it was a good species, and in this opinion he is sustained by Dr. Edw. L. Greene, who has examined the specimens collected on Sheep Mountain in 1895. The above preliminary description is based on his diagnosis. Prof. Macoun has seen the specimens labelled *P. Plattensis*, var. *pinnatisecta* in the Grey Herbarium, and believes them to be all referable here.

CALLITRICHE HAMULATA, Kürtz.

Dr. Morong having examined the specimens referred to this species (Macoun Cat. Can. Plants, Vol. II., p. 322,)

pronounced them to be *C. verna*, L. We have no authentic Canadian specimens of *C. hamulata*.

LUDWIGIA PALUSTRIS, Ell.

Wet places, Sproat Lake, Vancouver Island, 1887. (*John Macoun.*) Not before recorded west of the Saskatchewan.

GAYOPHYTUM RAMOSISSIMUM, T. & G.

Near Dog Lake, Okanagan Valley, B.C., 1895. (*Jas. Fletcher.*) New to Canada.

SANICULA.

Following Mr. Bicknell's revision of the eastern species of this genus, our herbarium specimens have been arranged as below :—

S. MARYLANDICA, L.

From New Brunswick and Nova Scotia west to Vancouver Island.

S. GREGARIA, Bicknell, Bull. Torr. Bot. Club, Vol. XXII., p. 354.

Near Belleville, Ont. (*John Macoun*) Wingham, Ont. (*J. A. Morton.*)

S. CANADENSIS, L.

We have, in our herbarium, no specimens of this species as diagnosed by Mr. Bicknell, though it may be common enough throughout Eastern Canada.

S. TRIFOLIATA, Bicknell, Bull. Torr. Bot. Club, Vol. XXII., p. 360.

Casselman, Ont.; Hastings Co., Ont.; Amherstburg, Ont. (*John Macoun.*) This *Sanicula*, with conspicuously

trifoliate, petioled cauline leaves, has been generally taken in Canada to be typical *S. Canadensis*, L.

OSMORRHIZA BREVISTYLIS, DC.

From Prince Edward Island west to Lake Winnipeg.

OSMORRHIZA LONGISTYLIS, DC.

From Nova Scotia west to the Saskatchewan.

OSMORRHIZA NUDA, Torr.

From the Eastern slope of the Rocky Mountains west to Vancouver Island.

OSMORRHIZA OCCIDENTALIS, Torr.

Mountain woods at Ainsworth, Kootanie Lake, B.C., alt. 5,000 ft., 1890. (*John Macoun.*) A new station for this plant.

CICUTA CALIFORNICA, Gray.

New Westminster, B.C.; Ainsworth, Kootanie Lake B.C. (*John Macoun.*) Not before recorded from British Columbia mainland.

CARUM CARUI, L.

Waste places near the brick-yard at Banff, Rocky Mountains. (*John Macoun.*)

LIGUSTICUM GRAYI, C. & R.; Macoun, Cat. Can. Plants, Vol. II., p. 327.

Woods on the mountains at Ainsworth, Kootanie Lake, B.C., alt. 5,000 feet. (*John Macoun.*)

LIGUSTICUM SCOPULORUM, Gray.

Specimens collected by Prof. John Macoun, at Roger's Pass, Selkirk Mountains, B.C., in 1890, have been doubt-

fully referred here by Prof. Coulter. Not before recorded from Canada.

HELIANTHUS GROSSE-SERRATUS, Martens.

Along the Grand Trunk Railway, near Stamford, Ont., 1895. (*R. Cameron.*) Introduced from United States.

CLADOTHAMNUS CAMPANULATUS, Greene, Erythæa, Vol. III., p. 65.

Shrub 3 to 5 feet high, with few and stoutish ascending branches; leaves lanceolate, 1 to 3 inches long, tapering to a short petiole, which, together with the veins beneath, is more or less strigose-hirsute with red hairs; flowers solitary or in pairs or threes, from lateral buds, on pedicels ½ inch long, those setose-hispid with red hairs; sepals ovate-oblong, densely ciliate with short gland-tipped hairs; corolla light salmon colour, campanulate, the petals joined at base into a short tube; anthers opening only by a pair of large round terminal pores.

Credited to British Columbia by Dr. Greene, but all our specimens, both from Vancouver Island and the mainland, are *C. pyrolæflorus*, Bong. The new species should be looked for by collectors in British Columbia on the higher mountains of the Coast Range. We have specimens of *C. pyrolæflorus* collected at Sitka by Bongard himself.

VINCA MAJOR, Linn.

In fields near Victoria, Vancouver Island, 1893. (*John Macoun.*) Escaped from gardens.

GENTIANA PLATYPETALA, Griseb.

Mount Rapho, Bradford Inlet, Lat. 56° 13′, Long. 131° 36′, alt. 4,050 ft., July 7th, 1894. (*H. W. E. Canavan.*) Yakoun Lake, Queen Charlotte Islands, 1895. (*Dr. C. F. Newcombe.*) New to Canada.

MENYANTHES CRISTA-GALLI, Menzies.

Port Simpson, B.C., 1893. (*Jas. McEvoy.*) Shore of Yakoun Lake, Queen Charlotte Islands, 1895. (*Dr. C. F. Newcombe.*)

MYOSOTIS CÆSPITOSA, Schultz.

Cartwright, Ont., 1891. (*W. Scott.*) New to Canada.

SOLANUM NIGRUM, L., var. VILLOSUM, Mill.

A new station for this plant is New Westminster, B.C. 1895. (*A. J. Hill.*)

VERBASCUM THASPUS, L.

Waste plates, Revelstoke, B.C.; Vernon, Lake Okanagan, B.C., and Sannach Road, near Victoria, Vancouver Island. (*John Macoun.*) Not before recorded west of Ontario.

VERBASCUM BLATTARIA, L.

Waste places, Revelstoke, B.C. (*John Macoun.*) On the sea shore at Union Mines, Comox, Vancouver Island. (*Anderson.*) Not before recorded west of Ontario.

CHELONE GLABRA, Linn.

Banks of west branch of Nottaway River, N.E. Ter., 1895. (*Dr. R. Bell.*)

EUNANUS BREWERI, Greene.

Amongst grass on hillsides at Sproat, Columbia River, 1890 (*John Macoun*, Herb. No. 10,307.) New to Canada. Determined by Dr. Greene.

THYMUS CHAMÆDRYS, Fries.

Stanley Park, Vancouver, B.C., September, 1895. (*Rev. H. H. Gowen.*) *T. Serpyllum*, L., is not uncommon in

Eastern America, but this species has not been before recorded from this country.

CALAMINTHA CLINOPODIUM, Benth.

New Westminster, B.C., 1895. (*A. J. Hill.*) Not recorded west of Manitoba. Probably introduced.

POGONIA OPHIOGLOSSOIDES, Ker.

In bogs, near small lakes at head of Gatineau River, Que. (*Dr. R. Bell.*)

ALLIUM GEYERI, Wats.

Gravelly banks, Botanie, west of Spence's Bridge, B.C., 1890. (*Jas. McEroy.*) Found on Vancouver Island, but not before on mainland of British Columbia. Referred by mistake to *Allium Nevii*, Wats., in No. II. of these papers.

ALLIUM ACUMINATUM, Hook.

On gravelly banks, Botanie, west of Spence's Bridge, B.C., 1890. (*Jas. McEroy.*) Not before recorded from mainland of British Columbia.

CAREX FESTIVA, Dew., var. GRACILIS, Olney.

Borders of coulees, Cypress Hills, Assa., 1894. (*John Macoun*, Herb. No. 7,396.) Not before recorded east of British Columbia.